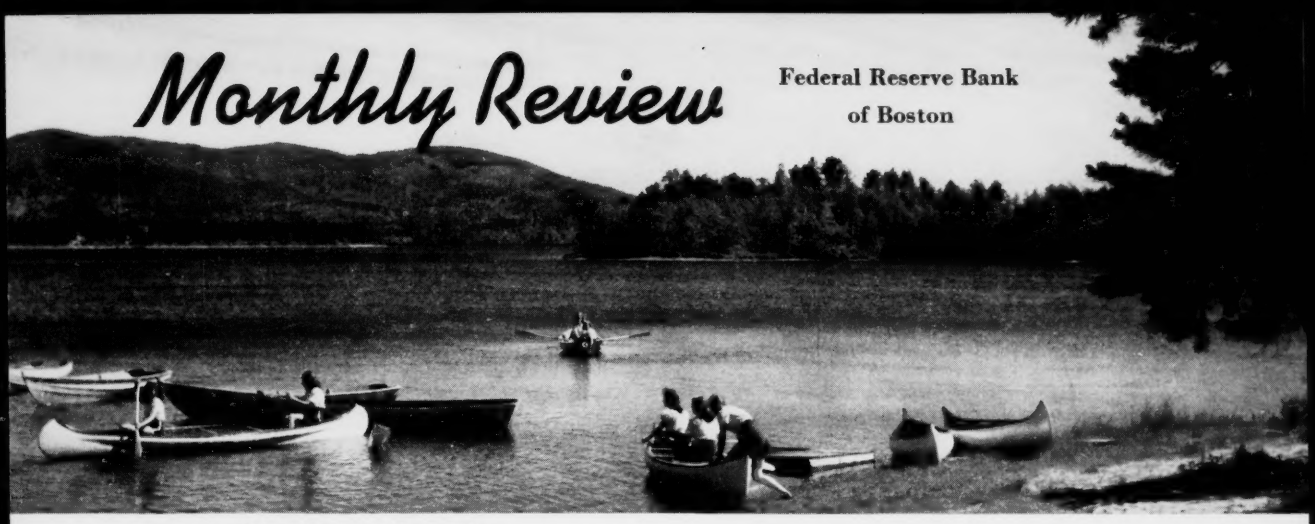
Monthly Review

Federal Reserve Bank of Boston



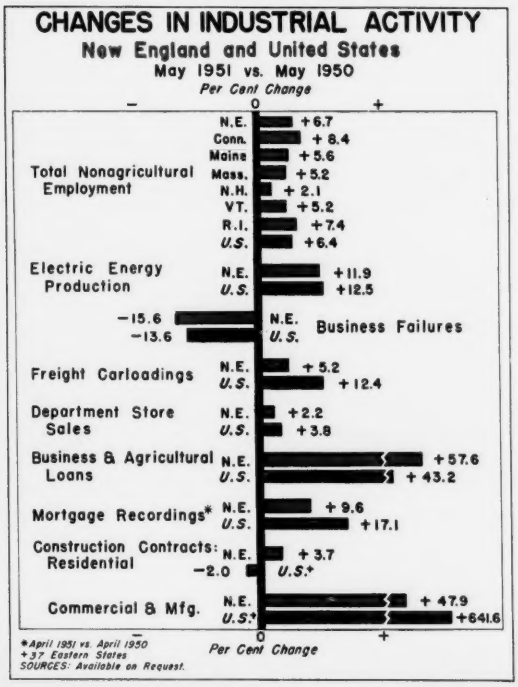
Camping in New England: Lake Ossipee, New Hampshire

Review of the Second Quarter:

Defense Production Supports Business Activity

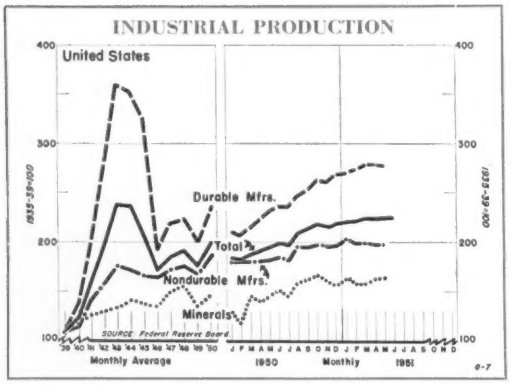
Industrial activity leveled off during the second quarter. With impetus gained from defense contracts, durable-goods industries expanded employment while some nondurable-goods industries, such as textiles, shoes and leather, experienced declines in orders and employment. Commercial banks increased their loans to defense producers while repayments exceeded new loans for civilian business. Construction activity, principally on military installations, has helped raise total nonagricultural employment to a new postwar high. New England firms, however, have not seized the opportunity to construct new plants and equipment at a rate in keeping with the region's position in the nation.

THROUGHOUT THE second quarter of 1951, the impact of the defense program on New England industry became more apparent as manufacturers converted industrial capacity to defense production. Declines in sales and new orders reflected a slowing of industrial activity expected during a period of transition, but depended principally on a letdown in civilian buying due to an accumulation of inventories. Firms which had received defense contracts and converted their production took up some of the slack in manufacturing employment.



A general decline in the demand for consumer durable goods during the second quarter caused a leveling-off in industrial production, orders, sales, and employment. The Federal Reserve Board's index of industrial production for the United States remained unchanged throughout the quarter at 223, a postwar peak approximately one per cent higher than its average level in the first quarter of 1951. Production of television sets, household appliances, furniture, and most other consumer durable goods declined. It appears that an easing of demand caused these cutbacks more than shortages of materials, in view of an increase in inventories of manufacturers and distributors. Expanding production of industrial and military equipment counterbalanced declines in the production of consumer durable goods.

Freight carloadings of New England railroads continued above year-ago levels during the second quarter, but the excess was not so great as it was earlier this



year. An increase in the number and dollar liabilities of business failures during both April and May also reflected a slackening in some lines of business activity.

The Associated Industries of Massachusetts reported that the volume of new orders placed with Massachusetts manufacturers decreased in April and May for the first time since December 1950. New orders for nondurable goods in May had dropped 16.2 per cent from their peak in March and durable goods orders had declined 13.2 per cent. The combined index of orders decreased 14.1 per cent from March to May but still exceeded the May level of 1950 by 48.2 per cent. All industries except the chemical and leather and leather products industries had a larger volume of new orders in May 1951 than in May 1950.

Manufacturers' inventories increased slightly during the second quarter. While department store inventories continued well above year-ago levels, they began to fall off toward the end of the quarter as stores adjusted their buying policies to meet changes in demand.

Employment Rises Slowly

A level of manufacturing employment 154,500 workers higher in May 1951 than in May 1950 indicated that New England manufacturers were taking the changeover to defense production in their stride. Every industry except leather and shoes recorded a year-to-year increase in employment, according to an accompanying chart. Paced by the machinery industry's increase of 27 per cent, employment in the durables group expanded by 20 per cent. Nondurable-goods industries averaged only a four per cent increase.

A slowing down in the receipt of new orders and inventory caution at the end of the second quarter led to cutbacks in production and a slight decline in manufacturing employment from its peak in the first quarter. Expanding employment in the machinery, electrical-machinery, and transportation-equipment industries failed to offset employment declines in the important leather, shoe, and textile industries. Inability to match job requirements with skills and abilities of employees blocked employment shifts in some areas. Nevertheless, gains in all categories of nonmanufacturing employment in May raised total nonagricultural employment to a record postwar level of 3,444,000 workers.

Retail trade in New England during the second quarter of 1951 settled back to a dollar volume approximating the level for the corresponding period a year ago. Sales in Downtown Boston stores lagged behind those in the second quarter of 1950 by two per cent. A slump in sales of household appliances, television sets, and recent models of used cars probably resulted from less anticipatory buying, repayment of debt, and instalment credit controls. Increased activity in industries with an increasing volume of defense orders, such as machine tools and aircraft, resulted in larger payrolls and boosted comparative year-to-year sales gains to higher-than-average levels in retail stores in the states of Connecticut and Vermont.

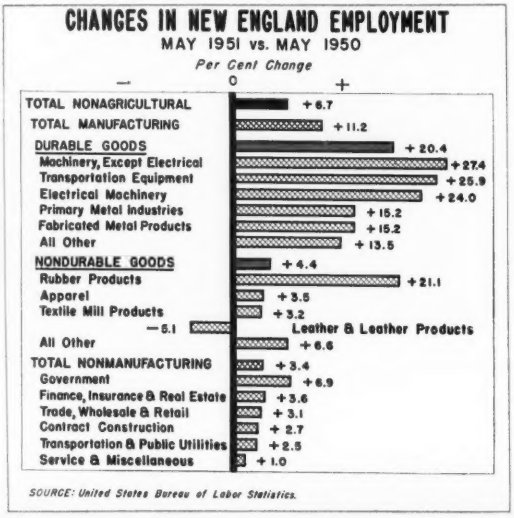
Construction

The anticipated drop in building of one- and two-family homes failed to become clearly apparent during the second quarter, partly because of unused commitments made before the credit restrictions became effective. The value of contract awards for residential building during the quarter was 18 per cent below that of the corresponding period in 1950 largely because of a sharp drop in the apartment house building program.

NPA conservation order M-4 has brought reductions in construction of buildings for social and recreational, and some commercial purposes. Stepping up of construction of industrial buildings, activity in road and other public works construction, together with some public utilities projects such as the natural gas pipelines, have compensated for other declines.

Work on important military construction projects started in New England during the second quarter. Total military construction in New England during 1951 would probably reach $100 million according to an announcement of the U. S. Army Corps of Engineers. By June New England contractors had received contracts in excess of $28 million.

New England received 18 per cent of the $3 billion of unclassified United States defense contracts (exclusive of construction) during March and April. The textile industry received contracts totaling $349 million and accounted for 63 per cent of all unclassified con-



tracts awarded to New England firms. The transportation industry received seven per cent, the leather and leather products industry six per cent, and the electrical-machinery industry four per cent of New England's total. The exclusion of construction from total defense contracts announced in Department of Labor releases emphasizes New England's share of the nation's manufacturing for defense.

New England industry is not expanding its private facilities at a rate that will maintain its relative position in the national economy. This warning was sounded in a report on the New England Economy issued in July by a New England Committee appointed by the Council of Economic Advisers. As of July 6, New England firms (exclusive of the proposed steel mill) had received only 2.6 per cent of the total value of certificates of necessity in the United States. It is evident that New England firms are not taking the initiative in expanding facilities with the tax advantage of rapid amortization of capital costs.

Loans Support Defense Program

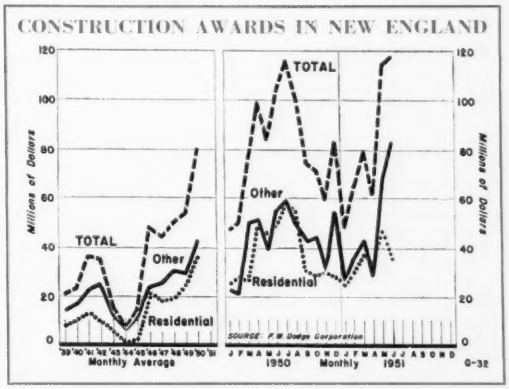
New England banks extended commercial, industrial and agricultural credit during the second quarter at a rate which more than offset repayments on outstanding loans. The net increase amounted to about one per cent, but it went against expected seasonal declines. The increase is directly attributable to increased loans to support defense activity.

Loans to finance defense contracts and defense-supporting activity increased by $6.9 million in the last half of the second quarter at a sample of reporting New England banks. Nondefense loans declined by $13.9 million during the same period. New loans classified as nondefense were used largely for inventories and working capital and were concentrated in the leather, textile, apparel and metals and metal products groups. Repayments of nondefense loans were made by a wide range of businesses but chiefly by trade and commodity groups and processors of food, liquor and tobacco.

Defense Orders Support Durables

Increased activity in the nonelectrical-machinery industry helped to maintain durable goods production and employment at high levels. The tooling-up of industry swelled the volume of orders for machine tools and metalworking machinery. Responding to this demand, manufacturers in some areas sought to expand production by lengthening the workweek from 45 to 50 hours. Skilled machinists and tool-makers continued to be in urgent demand. Many concerns in the nonelectrical-machinery industry are expanding their facilities. Among the new projects under way are a $6 million machine tool plant, a $1.5 million addition to a factory making grinding and boring machines, a $50 million plant in Massachusetts to house the world's largest hydraulic press forging hammers, and a $1 million ball-bearing plant in Connecticut.

Electrical-machinery plants working on Government orders continued to expand operations during the second quarter, while those engaged primarily in production of civilian goods curtailed output. During a single week early in the second quarter, unclassified contracts awarded to New England electrical-machinery manufacturers amounted to $9.7 million. In contrast, plants producing radios, television sets and parts, and electrical household appliances curtailed operations in response to a drop in civilian demand. In Massachusetts new orders for electrical equipment in May decreased 30 per cent from the previous month, but were still 67 per cent higher than in May 1950.



The hiring of additional workers by Connecticut aircraft firms in the transportation-equipment industry in May brought the industry total to a new high of 61,800 workers. Additional employment will be provided by Connecticut aircraft manufacturers who plan large plant expansions in the second half of 1951.

Declines in ship repair and auto assembly were more than offset by increased activity in some shipyards and in plants turning out aircraft parts and equipment. Large Government contracts received by shipyards and aircraft manufacturers will certainly require additional workers in the coming months.

Activity in the primary metals industry continues to expand as demand for the industry's output remains high. However, material shortages, especially in steel, copper and aluminum, have forced many producers of fabricated metal products without defense contracts to cut back operations and have hampered expansion of others. Civilian goods producers have adopted a cautious attitude toward the CMP program that started July 1. Many firms are also finding it increasingly difficult to fill their needs for skilled metalworkers.

Counter to the general industrial trend, brass-mill operations in the quarter were well below the level of the same period last year. Shortages of copper and failure of defense orders to materialize in the anticipated volume resulted in curtailment of output to a level almost 60 per cent below that of a year ago. Restrictions on the use of copper for civilian goods were among the first controls to be imposed. So far only about 30 per cent of the industry's production is for defense.

Steel ingot operations in New England during the second quarter of 1951 were at the average rate of 90 per cent of capacity, up sightly from the previous quarter and four per cent above the average for the second quarter of 1950.

Demand for iron and steel products is brisk but producers are feeling the pinch of material shortages. New England foundries hold sub-normal inventories of pig iron, but the supply problem here is less acute than in

other districts. Scrap steel is also in short supply and the situation is not expected to ease in the near future. The strong demand for electric welded pipe is boosted by the use of 150,000 tons in the construction of the new natural gas main lines.

The construction lumber market softened during March, April, and May, but showed some signs of stabilizing during June as indications of the extent of future defense order buying became clearer. Local hardwood lumber for industrial use enjoyed a relatively firm market. The June furniture shows were marked by dullness and revealed no indications of early change in the demand for lumber by the furniture manufacturers. The demand for hardwood flooring lumber is weak, somewhat more so for oak than for maple, and there are signs that some distributors have allowed their inventories to fall below working levels.

The New England furniture manufacturers' market softened gradually though not alarmingly during the second quarter of 1951. Employment in the industry declined four per cent between April and May but remained on a par with employment levels of the second quarter of 1950. The smaller, more highly specialized producers were most adversely affected. The larger plants, turning out more varied lines, still had previously accumulated backlogs to work on. One large operator accepted orders only on a quota basis throughout the quarter.

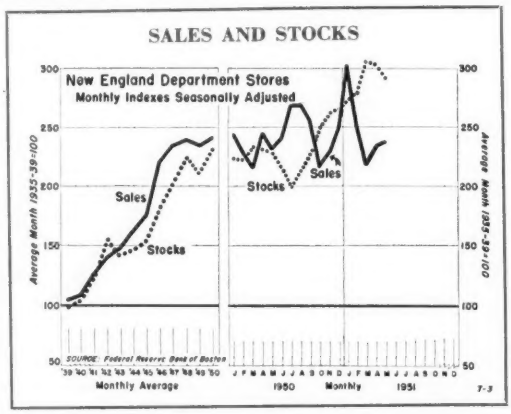
Seasonal Drop in Nondurables

Lagging sales combined with large inventories caused manufacturers of nondurable consumer goods to cut back production during the second quarter. Despite slight gains in the chemical and rubber industries, employment in the nondurable-goods industries dropped by 40,000 from the peak in February 1951.

Defense orders provided the principal support for textile mill operations in New England during the second quarter of 1951, especially in the woolen and worsted and narrow fabrics divisions. Civilian orders fell off in most lines of textile manufactures in response to high levels of inventories in the hands of converters, jobbers and retailers, and prospects for lower prices in the future. A decline of about 40 per cent in the prices of raw wool and wool top from their peaks in the first quarter had begun to reflect itself in lower prices of fabrics offered by manufacturers at the end of the second quarter. Price regulations added to the problems of manufacturers who worked on the task of completing their price schedules.

Seasonally dull conditions prevailed generally in the apparel trade through April and May. Some firms making shirts and cotton dresses and those with Government orders have been very busy, but layoffs and staggered workweeks have been general in much of the industry. By early June workers were being recalled and production on fall goods was getting under way. It will reach a peak after the vacation shutdowns in early July. Because of high inventories, retailers have been more cautious than usual about placing fall commitments.

This year the usual post-Easter slump was sharper than usual for New England shoe plants. The high level of production in the second half of 1950 and early 1951 coupled with lagging retail shoe sales resulted in a piling



up of inventory with retailers and manufacturers. Layoffs, staggered workweeks, and short time were general in many areas. Women's novelty shoe plants were especially hard hit. In some areas, however, military contracts kept plants which produce men's shoes running at peak levels. By the end of May mills were receiving an increased volume of orders for fall footwear.

New England jewelry plants curtailed production sharply during April and May due to cancellations, lack of new orders and material shortages. Inventories, especially of costume jewelry, are high at the manufacturing, retail and jobbing levels. Defense orders, on which the industry counted to keep their working forces intact, are just trickling in.

Material shortages continued to be responsible for scattered layoffs and shortened workweeks in the area's rubber plants. However, operations are well above the level of a year ago. Most of the large plants in the area have received enough rated defense orders to maintain full-time operations, but many of the smaller plants that are just starting to get this business in any appreciable volume have had to curtail production in order to keep within their material allocation.

Pressure of demand on manufacturers of paper, paperboard, and allied products continued without abatement during the second quarter of 1951. Dealers reported, however, that signs of softening appeared in their markets during June. The problem of pulp supply for non-integrated mills continued severe, but a control order issued in June may bring relief. Integrated mills must set aside three per cent of their chemical pulp production for the pulp market. This should provide pulp sufficient for operation of the non-integrated mills at 95 per cent of their 1950 rates. Demand for wastepaper, as a substitute for new wood pulp, remained strong, and high prices continued to prevail. New England paper products converters reported uncomfortably long backlog order files with no evidence of relief at the end of June.

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Monthly Review
FEDERAL RESERVE BANK OF BOSTON

THE NEW ENGLAND *Textile Industry*

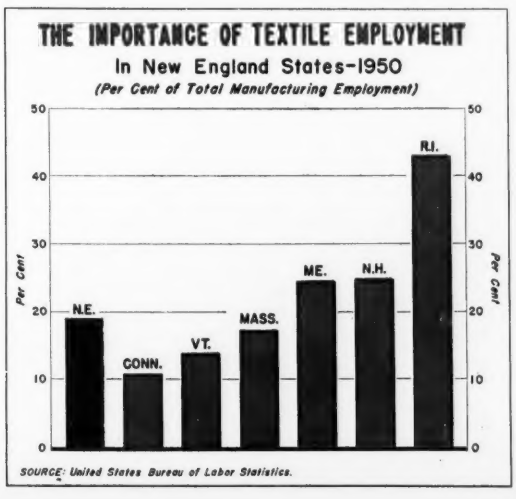
There is a lot of life in the old girl yet. This statement vividly describes the New England textile industry which, despite some opinions to the contrary, has progressed considerably since Samuel Slater came to Rhode Island in 1790.

In the few paragraphs in this *Review*, we will not solve the problems of the New England textile industry. Solutions to problems must necessarily depend on the action taken by management and employees in individual plants, union officials, trade associations, selling houses, banks, factors, legislators, administrative officials and others who directly and indirectly affect the fortunes of the mills. We will, however, set forth some of the characteristics and problems of the industry.

Generalizations about the textile industry and even divisions in it are hazardous because of the variety of firms and the diversity of their products. One simple generalization, however, applies to all firms. If they cannot produce efficiently and sell their products for enough revenue to cover their costs, including a satisfactory return on their investment, sooner or later they will liquidate, move, or expand where they can earn a relatively higher return.

The New England textile industry includes many different types of manufacturing plants which are generally classified as woolen and worsted, cotton, rayon and silk, dyeing and finishing, and miscellaneous groups. They process natural fibers such as cotton and wool or man-made fibers such as rayon and nylon. They have machines which weave, braid, knit, and twist yarn to make fabrics. They furnish dyeing, finishing, and printing services which change the character and appearance of fibers, yarns, or fabrics along the flow of production. The industry turns out products which consumers may use directly or which go to the garment, shoe, automobile, millinery or other industries, or to military procurement agencies. The industry is complex because of its thousands of products and the possibility of having integrated manufacturing processes in one mill yard or having the individual stages in production performed by a number of plants, each specializing in a particular process. Competition is thus vigorous all along the line and specialized knowledge of processes and fibers has become an essential requirement for survival.

Firms in the textile industry rely on specialists to help them with their production, sales, and financial problems. Dealers who sell wool and cotton search for specific types and qualities of fibers for their customers and offer suggestions gained from research and experience. Yarn spinners and worsted top-makers work to rigid specifications of dealers and mills. Selling houses transmit style ideas back to the industry, assist them to merchandise their products, and share the risk of carrying inventories. Factors furnish credit know-how and provide working capital when they acquire accounts receivable from textile producers. Management engineers assist with programs designed to improve plant layouts and efficient operation of machinery. Small and medium-size firms depend on the research of textile machinery, chemical, and testing firms as well as textile schools.



Importance of Employment

Despite the forces of attrition and problems of adjustment which have beset the industry, in 1947 there were 1,450 establishments and 283,017 employees in the New England textile manufacturing industry. During the first five months of 1951, 273,400 workers, or 21 per cent of all textile workers in the country, earned their living in New England.

Textile employment in 1950 accounted for 19 per cent of total manufacturing employment in New England. About one out of 12 nonfarm workers in New England had jobs in textile mills. The relative importance of textile employment to total manufacturing employment varied among individual New England states from 11 per cent in Connecticut to 43 per cent in Rhode Island, as the accompanying chart shows. Consequently, the need for special attention to textile problems and solutions such as greater diversification of employment varied among individual states.

Textile communities had special problems which appeared in vivid form in 1949-1950 when 10 different communities[1] dependent to a large degree on textile employment received classifications as distress areas because unemployment exceeded 12 per cent of employees holding and seeking jobs. The appearance of these soft spots in New England stimulated the recent study of The New England Economy by the Committee of New England Economists under the auspices of the Council of Economic Advisers.

Dependence on civilian demand for apparel, furnishings, household textiles and other seasonal markets reflects itself in a fluctuating pattern of textile em-

[1] Danielson and New London-Groton, Connecticut; Biddeford-Sanford, Maine; Fall River, New Bedford, Lawrence, Lowell, Worcester, Massachusetts; Manchester, N. H.; Providence, R. I.

ployment during a calendar year. In the aggregate, textile employment ordinarily begins to dip at the beginning of the second quarter and reaches its low point in July. An individual firm may stabilize its own employment, however, and there are some counterbalancing seasonal patterns within the entire industry. But the months of April, May, and June usually reveal slack periods of activity in the cotton, woolen and worsted, rayon and silk, dyeing and finishing divisions, and in the miscellaneous group; e.g., levers lace.

Textile employment is often a family affair; two or more members of a family frequently work in the mills. Consequently, women comprise a large percentage of textile employment. In 1947 they accounted for 44 per cent of employment in the entire textile industry. In 1950, 42 per cent of employees in the northern division of the cotton and rayon broad woven goods division were women. Many older employees have been displaced as new machinery and increased use of man-made fibers eliminated natural yarn preparatory operations and mills closed.

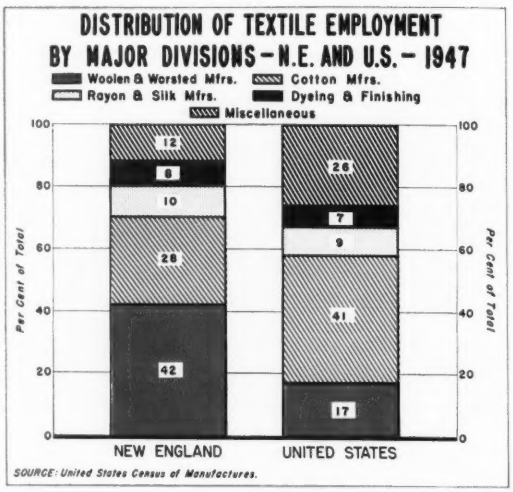
In 1947 woolen and worsted manufacturing employment in New England, including carpets and carpet yarns, accounted for 55 per cent of similar employment in the United States. Dyeing and finishing accounted for 29 per cent, rayon and silk 24 per cent, cotton manufactures (including narrow fabrics and thread mills) 16 per cent, and the miscellaneous section 10 per cent of total employment in their respective branches of the nation's textile industry.

Woolen and worsted manufactures in terms of employment was the most important division in the New England textile industry, as shown by an accompanying chart. Cotton manufactures held the most important relative position in the nation. The dyeing and finishing, and rayon and silk divisions accounted for approximately the same percentages of textile employment in both the United States and New England. Employment in the miscellaneous division was relatively more important in the nation, principally because of knit goods.

The loss of employment in cotton manufactures caused most of the readjustment problems blamed on textile weaknesses in the New England economy from 1919 to 1947. The drift away from New England continues, but at a slower rate because of diversification in products, sales promotion, and modernization of equipment by leading mills. In recent years the focus of attention has shifted to woolen and worsted manufacturers because of savings in cost from new types of drafting and spinning machinery, an expansion of efficient capacity in the South, competition from man-made fibers in a period of high prices of raw wool, the physical character of many "soft-woolen" plants, and work-assignment difficulties in collective bargaining negotiations. After 1947, closings of high-cost woolen mills and intermittent employment at woolen and worsted mills have created unemployment troubles in all of the New England states.

Need for Research

The New England textile industry has acquired attitudes and physical characteristics which an old established industry accumulates over a long period of time. In spite of the good work accomplished by management and employees who have recognized opportunities in many mills, the rapid rate of machinery development, need for modernization, and the accelerated development of new fibers called for outside assistance.



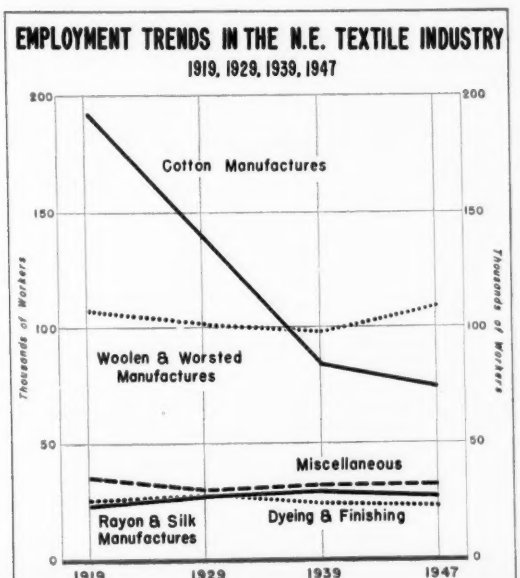
The American Society of Mechanical Engineers has begun a study of the methods employed in establishing and operating new plants which have manufacturing costs lower than those currently obtainable in New England. An engineering approach will enable manufacturers to determine how to reduce operating costs and improve product quality while considering better ways to adjust the worker into the changing picture. The Textile Division of the Society was aware of the impact from high material costs, increasing labor costs, and the threat of foreign competition.

Two of New England's leading textile schools have new programs and equipment which will assist in training personnel to solve textile problems. The Rhode Island School of Design has a pilot plant to facilitate the study of processing and blending man-made fibers with natural fibers. Lowell Textile Institute has a workshop for the study of fiber characteristics in session at the present time and is installing machinery to help instruct personnel in the use of reworked and reprocessed wool. Research in the use of reworked and reprocessed wool and an enlightened merchandising program to sell the products manufactured from this raw material may assist woolen mills in New England to regain some of their lost status. New England textile mills have an opportunity to benefit from these programs if they bid actively for the services of textile school graduates and sponsor refresher courses for their promising employees.

Textile firms in New England have confirmation of the value of research in the record made by their competitors and their own experience. Perhaps the ideal attitude toward research was expressed by a New England cotton manufacturer who said recently, "Our research department has helped, too. You do not see Ph.D.'s in many textile companies. But we believe in them and we would be just as hesitant to curtail in our research department as we would be to contract our sales promotion and advertising. . . . Sales promotion must work hand-in-hand with research."

Some textile companies in New England have taken vigorous steps to improve their competitive positions. Worsted companies have developed new machinery for blending wool and man-made fibers, and have modernized old plant buildings and installed new machinery to obtain the maximum benefit from a continuous flow of production. Cotton and rayon concerns have experimented with blends of fibers and produced improved summer suitings as well as many other fabrics. Narrow fabric plants have diversified and improved their lines of industrial and civilian products. A braid manufacturer demonstrated his resourcefulness by dyeing fiberglass wire-sleeving in his wife's washing machine in order to permit identification of wires in a complicated electrical installation. Woolen mills have installed the "cotton-type" system of spinning and have diversified products in order to reach the apparel, automotive, commercial display, and dude-ranch markets. They have hired young men who know competitive and research trends in other areas. Finishing plants have installed up-to-the-minute machinery and have developed new finishes to resist fire, moths, wrinkles, creases, shrinkage, sunrot, water, mildew, stretch, heat and cold. A man with local pride renovated a corduroy mill and put it on the track leading to intelligent and profitable merchandising. A velvet mill improved the quality in its fabrics beyond that in fabrics produced by its competitors. And there are many other similar cases which illustrate the way to get results.

A prominent leader in the New England textile industry recently stated that "The textile industry is perhaps the last great industry to get out of horse-and-buggy days. In many respects we are still making fabrics based on rule-of-thumb in a scientific age. The textile industry in New England is faced with modernization whether it likes it or not, and mills which do not modernize will pass out of the picture. I believe that the future of our New England textile industry is based upon our ability to use man-made fibers and mix or blend them with the natural fibers for better fabrics than we have ever had before. Manufacturers must understand the physical, biological, and the chemical characteristics of fibers."



The *Providence Journal* recently made a survey of new man-made fibers, their usefulness, and potential impact on Rhode Island, an important worsted manufacturing area. The principal conclusion was "Find the fiber most suitable to your markets. Then shoot for that market." The consumer will determine what will sell and he or she has not given the final answer. Blended fabrics will introduce most of the new fibers. To obtain the advantage of style maneuverability, the worsted mills which have not done so will have to purchase new blending and drafting equipment designed to handle any natural or man-made fiber known at the present time. Styling vision in the worsted industry and a knowledge of wool should help mills to make the adjustment if they are alert to changes going on in the development and uses of fibers.

Other observers concur in the *Providence Journal's* findings that New England mills should emphasize high style fabrics on the one hand while paring down costs through the use of the most modern flexible equipment. They should also exert persistent, intelligent efforts to obtain cooperation from labor in assigning work loads.

Position of Man-Made Fibers

The production record for different types of fibers in 1950 enables one to obtain a better perspective of inter-fiber competition, and places the glamour fibers in their relative position of importance. Last year rayon accounted for 19 per cent, cotton 68 per cent, and wool 13 per cent, and silk only a fractional per cent of world production of these four types of fibers.[2] Production of *all other man-made fibers* (dynel, orlon, nylon, etc.), almost all in the United States, was only 145,000,000 pounds,[3] 11 per cent of U. S. rayon production, or less than one per cent of the world production of the four textile fibers. The gradual process of introducing newer types of man-made fibers will allow New England mills to adapt their operations to changes as they occur in the future.

On the other hand, a recent study disclosed that total U. S. fiber consumption by end-use increased by 22 per cent from 1937 to 1949, and man-made fibers accounted for 73 per cent of the increase.[4] Rayon and other man-made fibers increased their percentage of total fibers consumed in men's and boys', women's, misses', children's and infants', household, industrial and miscellaneous, and export uses — principally at the expense of cotton. The relative penetration was greatest in industrial and miscellaneous uses. Wool lost ground relatively in textile products for men and boys between 1937 and 1949, but gained relatively in use for women's and children's items.

New England increased its consumption of rayon filament yarn for textile uses by 49,000,000 pounds from 1940 to 1950, but its share of total consumption declined

2 *Rayon Organon*, June 1951.
3 *Ibid*, February 1951.
4 *Ibid*, Supplement, May 1951.

from 29 per cent in 1940 to 25 per cent in 1950.[5] Cotton-growing states increased their consumption of rayon filament yarn for textile uses by 190,000,000 pounds from 1940 to 1950 and their share of total consumption rose from 38 per cent in 1940 to 51 per cent in 1950. In addition, they used about two-thirds of the rayon yarn which went into tires and related uses in 1950, a field in which New England is woefully weak. The data do not include figures on the consumption of rayon staple fiber which has also increased in New England, but they indicate that the region is facing a locational pull to the South in the rayon-weaving industry similar to that already experienced in the cotton industry. The woolen and worsted industry will also have to brace itself to withstand the pull when the production of new types of competitive man-made fibers reaches higher levels.

Contribution to Defense

Textile mills in New England are producing for defense orders and have turned out millions of yards of broad and narrow fabrics for military purposes in past wars. Contracts for textiles and apparel accounted for 14.5 per cent of New England's total war supply contracts and almost 30 per cent of United States production of textile and apparel items during World War II. For the period from July 15, 1950 to approximately the middle of April 1951, total textile defense contracts awarded in New England were approximately $585,000,000, an estimated 60 per cent of all non-secret contracts let to the region's producers. Woolen and worsted contracts accounted for 87 per cent of the textile total.

Woolen and worsted capacity enabled New England to supply the armed services with their requirements. The upturn in fortunes may give some marginal mills which have not done so an opportunity to put their houses in order. A recent decision to purchase wool serge cloth containing up to 25 per cent of orlon acrylic fiber or nylon, and other blended fabrics for military use will stimulate and quicken the acquisition of blending knowledge in the industry. Small mills, however, will need considerable assistance because day-to-day production problems on current orders hamper work on research.

The New England textile industry has a higher proportion of its workers organized than the textile industry in the South. Although unionization is by no means 100 per cent complete in the New England textile industry, the wage pace-setting of dominant unionized areas (e.g., Fall River-New Bedford) or companies (e.g., The American Woolen Company) exerts its influence among mills in the entire region. In recent years employees in New England textile mills have fairly consistently received wage rate increases and other benefits before employees in other regions after collective bargaining or by unilateral action. New England mills have a competitive disadvantage because of a differential in wages. Recently negotiated wage settlements which await approval of the Wage Stabilization Board would further widen the differential.

Modernization and Attitudes

The future of many mills in the New England textile industry depends upon successful collective bargaining to provide the solution for many of the problems facing the textile industry. The New England textile industry needs more mills with aggressive management and an interest in research. When mills install the necessary new machinery in modernized plants, change layouts to gain benefits from a continuous flow of production, or shift to new fibers, they also face a universal problem of how to obtain employee cooperation in accepting changes in work assignments. The Massachusetts Textile Commission recognized this issue when it stated, "The adjustments in these cases must be handled through the processes of collective bargaining. To accelerate this program, a better understanding of the problem is necessary by workers and management. It should be pointed out that, although new assignments may mean further displacements of workers, failure to recognize the necessity and take action may result in the disappearance of the industry from the Commonwealth. Management should also develop and install modern and efficient plant and machinery layouts with a view towards improving their competitive position." An analysis of the methods used in mills where collective bargaining has found solutions during the past few years may provide some guides which would be helpful in future negotiations.

Unions should provide leadership for their members by helping them meet the problems of changes in machines, layouts, and new fibers just as management should exert its initiative in meeting the challenge of manufacturing and merchandising on a competitive cost basis. Unions would like to avoid the criticism that they are dragging their feet in the adaptation to change. Mill closings will weaken their position. Consequently, managements in mills organized by unions have an opportunity to assist in the process of adaptation by soliciting advice and suggestions for easing the effects before they make required changes to modernize their plants and to increase operating efficiency.

Adaptation to Change

Mills in the New England textile industry have a variety of individual problems because of the different rates of change which have affected and will affect their operations. For example, machinery improvement and modernization programs have different degrees of urgency for braid mills than for worsted mills. Natural fibers have preferred positions in many uses, but the chemical industry has intensified competition among fibers in a period of international upheaval and fiber scarcity. The community, often in an outside region, has assumed a new role in the field of competition by bidding with special concessions for expansion in capacity which will turn out products competitive with those produced in New England.

Nevertheless, the record shows that competent management has operated its textile mills successfully in New England. It has made the necessary adjustments and has provided leadership. Announcements of plant closings and plans for expansion in other regions, however, continue to appear in the daily press. Maintenance of textile employment remains as a pressing problem for New England. Its solution requires the combined effort of all of those on whom the mills depend for their successful operations.

[5] *Rayon Organon*, February 1951.